Title (en)

System and method for mitigating cross-saturation in optically amplified networks

Title (de)

System und Verfahren zur Vermeidung von gegenseitiger Sätigung in optisch verstärkten Netzwerken

Title (fr)

Système et méthode pour éviter la saturation mutuelle dans des réseaux amplifiés optiquement

Publication

EP 0829981 B1 20050112 (EN)

Application

EP 97306774 A 19970902

Priority

US 71356896 A 19960913

Abstract (en)

[origin: EP0829981A2] A system and method of protecting all the amplifiers in a link between wavelength routing network elements of an optical network. According to the invention, an optical control channel is added before a plurality of optical amplifier, preferably the first amplifier, in a link. To prevent improper loading of downstream links, the control channel is stripped off at the next wavelength routing network element. The power of the control channel is automatically adjusted using a fast feedback circuit to hold substantially constant the total power of the signal channels and the control channel at the input of the first amplifier following the feedback loop. In this manner, channel loading of all optical amplifiers in the link is maintained substantially constant, and the incidence of error bursts, as might otherwise result when one or more channels are added or dropped due to a network fault or reconfiguration, is substantially reduced. <IMAGE>

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